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EXAMINER	
MACILWINEN, JOHN MOORE JAIN	
ART UNIT	PAPER NUMBER
2442	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hoffmanwarnick.com

Office Action Summary	Application No.	Applicant(s)	
	10/596,050	COLLET ET AL.	
	Examiner	Art Unit	
	John M. MacIlwinen	2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 January 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,6-8 and 10-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,6-8 and 10-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/18/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 01/06/2010 have been fully considered, and Applicant's arguments on page 12 and are persuasive. However, after further consideration a new grounds of rejection has been made in view of Ishiguri (US 2002/0004837 A1) and Funk (5,937,162).

2. Regarding Applicant's arguments on page 11, Applicant argues that "Megiddo does not teach or suggest both splitting and re-assembling the chunks using the same 'predetermined algorithm'". However, the "predetermined algorithm" is in Megiddo, Fig. 4 for splitting/encrypting. The same algorithm is used in "reassembling/decrypting" as show in Fig. 5. Applicant appears to be arguing that the splitting and reassembling processes utilize identical steps; however, such a limitation not claimed. Fig. 4 and Fig. 5 of Megiddo represent different steps of a common splitting/reassembling algorithm. Applicant's arguments thus are not persuasive.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 4, 8 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Megiddo (US 6,745,231 B1) in view of Togawa (US 2002/0004821 A1), Ishiguri (US 2002/0004837 A1) and Funk (5,937,162).

5. Regarding claim 1, Megiddo shows a system for enhancing security of e-mails transmitted from a sender to a receiver over a data transmission network, comprising (Abstract, Fig. 3):

a Message Transfer Agent (MTA) associated with said sender for transmitting (Figs. 1, 2) over said network an original e-mail sent by said sender according to a predetermined list of a plurality of relay MTAs (Figs. 2, 3, 5, col. 2 line 66 – col. 3 line 2);

said MTA associated with said sender including a message splitting means adapted to divide said original e-mail into a plurality of chunks according to a predetermined algorithm (Figs. 4, 7, col. 4 lines 41 – 63) wherein each of said plurality of chunks is forwarded to a different one of the plurality of relay MTAs on the predetermined list such that each of said plurality of chunks is transmitted over a different pathway of the data transmission network (col. 5 lines 15 – 43), and wherein message splitting means divides the plurality of chunks of the original e-mail at the character level (Figs. 4, 5, 7, 8 and col. 4 lines 35 - 41); and

a chunk assembly agent for receiving from said relay MTAs the plurality of chunks and for re-assembling the plurality of chunks using said predetermined algorithm in order to re-build said e-mail (col. 3 lines 2 - 6, col. 4 lines 25 - 27), wherein each of said plurality of chunks is transmitted through a different relay MTA of the plurality of relay MTAs as a chunk e-mail having a same destination e-mail address (col. 5 lines 25

- 42).

Megiddo does not show where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent.

Togawa shows where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent ([113, 122, 206-109, 214, 217]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo with that Togawa in order to ensure the recipient can reassemble and utilize the message (Togawa, [35,41]).

Megiddo in view of Togawa do not explicitly show all of: wherein each of the plurality of chunks is preceded by a chunk number, re-assembling using said chunk number and using randomly selected pathways.

Ishiguri shows wherein each of the plurality of chunks is preceded by a chunk number ([31-36], Fig. 2C) and re-assembling using said chunk number ([29, 37-38, 49, 51]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa with that of Ishiguri in order improve capabilities for transmitting large amounts of data (Ishiguri, [10-12]).

Megiddo in view of Togawa and Ishiguri do not explicitly show utilizing randomly selected pathways.

Funk shows utilizing randomly selected pathways (col. 12 lines 12 – 34).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa and Ishiguri with that of Funk in order to provide for better data distribution and thus improved performance (Funk, col. 12 lines 12 – 34).

6. Regarding claim 4, Megiddo shows

Megiddo does not show where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent.

Togawa shows where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent ([113, 122, 206-109, 214, 217]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo with that Togawa in order to ensure the recipient can reassemble and utilize the message (Togawa, [35,41]).

7. Regarding claim 4, Megiddo shows a method for enhancing security of e-mails transmitted from a sender to a receiver over a data transmission network wherein a Message Transfer Agent (MTA) associated with said sender is in charge of transmitting an original e-mail sent by said sender, comprising (Figs. 4, 7):

dividing said original e-mail into a plurality of chunks using an algorithm, wherein dividing the original e-mail comprises of the original e-mail at the character level (col. 4 lines 35 – 41),

sending said chunks as e-mails over the data transmission network to a plurality

of relay MTAs defined in a predetermined list of relay MTAs (Figs. 1, 2, 4, 7, col. 2 line 55 – col. 3 line 2), wherein each of said plurality of chunks is sent to a different one of the plurality of relay MTAs on the predetermined list such that each of said plurality of chunks is transmitted over a different pathway of the data transmission network (col. 5 lines 15 – 43), and

re-assembling by a chunk assembly agent said chunks in order to re-build said original e-mail by using said predetermined algorithm (col. 3 lines 2 - 6 and col. 4 lines 25 - 27),

wherein each of said chunks is transmitted through a different relay MTA of the plurality relay MTAs as a chunk e-mail having a same destination e-mail address (col. 3 lines 1 – 2, Fig. 3 and col. 5 lines 25 – 42).

Megiddo does not show where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent.

Togawa shows where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent ([113, 122, 206-109, 214, 217]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo with that Togawa in order to ensure the recipient can reassemble and utilize the message (Togawa, [35,41]).

Megiddo in view of Togawa do not explicitly show all of: wherein each of the plurality of chunks is preceded by a chunk number, re-assembling using said chunk

number and using randomly selected pathways.

Ishiguri shows wherein each of the plurality of chunks is preceded by a chunk number ([31-36], Fig. 2C) and re-assembling using said chunk number ([29, 37-38, 49, 51]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa with that of Ishiguri in order improve capabilities for transmitting large amounts of data (Ishiguri, [10-12]).

Megiddo in view of Togawa and Ishiguri do not explicitly show utilizing randomly selected pathways.

Funk shows utilizing randomly selected pathways (col. 12 lines 12 – 34).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa and Ishiguri with that of Funk in order to provide for better data distribution and thus improved performance (Funk, col. 12 lines 12 – 34).

8. Regarding claim 8, Megiddo shows a security system, comprising:

a Message Transfer Agent (MTA) associated with a sender for transmitting over a network an original e-mail sent by the sender (Abstract, Fig. 3), the MTA including a message splitting system for dividing the original e-mail into a plurality of chunks according to a predetermined algorithm (Figs. 4, 7, col. 4 lines 41 – 63) and for forwarding the plurality of chunks to a plurality of relay MTAs defined in a predetermined list of relay MTAs (Figs. 2, 3, 5 and col. 2 line 66 – col. 3 line 2), wherein each of said plurality of chunks is forwarded to a different one of the plurality of relay MTAs on the

predetermined list such that each of said plurality of chunks is transmitted over a different pathway of the data transmission network (col. 5 lines 15 - 43), and wherein the splitting system divides the plurality of chunks of the original e-mail at the character level (col. 4 lines 35 – 41); and

a chunk assembly agent for receiving from the plurality of relay MTAs the plurality of chunks and for re-assembling the plurality of chunks using the predetermined algorithm in order to re-build the e-mail (col. 3 lines 2 – 6, col. 4 lines 25 - 27),

wherein each of said plurality of chunks is transmitted through a different relay MTA of the plurality of relay MTAs a chunk e-mail having a same destination e-mail address (col. 5 lines 24 – 42),

Megiddo does not show where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent.

Togawa shows where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent ([113, 122, 206-109, 214, 217]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo with that Togawa in order to ensure the recipient can reassemble and utilize the message (Togawa, [35,41]).

Megiddo in view of Togawa do not explicitly show all of: wherein each of the plurality of chunks is preceded by a chunk number, re-assembling using said chunk number and using randomly selected pathways.

Ishiguri shows wherein each of the plurality of chunks is preceded by a chunk number ([31-36], Fig. 2C) and re-assembling using said chunk number ([29, 37-38, 49, 51]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa with that of Ishiguri in order improve capabilities for transmitting large amounts of data (Ishiguri, [10-12]).

Megiddo in view of Togawa and Ishiguri do not explicitly show utilizing randomly selected pathways.

Funk shows utilizing randomly selected pathways (col. 12 lines 12 – 34).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa and Ishiguri with that of Funk in order to provide for better data distribution and thus improved performance (Funk, col. 12 lines 12 – 34).

9. Regarding claim 11, Megiddo shows a security system, comprising:

a chunk assembly agent for:

receiving from a plurality of relay Message Transfer Agents (MTAs) over a network a plurality of chunks of an original e-mail that has been divided into the plurality of chunks according to a predetermined algorithm (Fig. 8, Abstract), wherein each of the plurality of chunks is received from a different one of the plurality of relay MTAs such that each of said plurality of chunks is received over a different pathway of the data transmission network (col. 5 lines 15 - 43), and wherein the plurality of chunks of the original e-mail are divided at the character level (col. 4 lines 35 – 41),

wherein each of said plurality of chunks has a same destination e-mail address (col. 3 lines 1 – 2, col. 5 lines 25 – 42, Fig. 3),

re-assembling the plurality of chunks using the predetermined algorithm in order to re-build the e-mail (col. 3 lines 2- 6, col. 4 lines 25 - 27).

Megiddo does not show where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent.

Togawa shows where the chunk assembly is done before sending the message to the receiver and where the destination email address comprises an email address of the chunk assembly agent ([113, 122, 206-109, 214, 217]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo with that Togawa in order to ensure the recipient can reassemble and utilize the message (Togawa, [35,41]).

Megiddo in view of Togawa do not explicitly show all of: wherein each of the plurality of chunks is preceded by a chunk number, re-assembling using said chunk number and using randomly selected pathways.

Ishiguri shows wherein each of the plurality of chunks is preceded by a chunk number ([31-36], Fig. 2C) and re-assembling using said chunk number ([29, 37-38, 49, 51]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa with that of Ishiguri in order improve capabilities for transmitting large amounts of data (Ishiguri, [10-12]).

Megiddo in view of Togawa and Ishiguri do not explicitly show utilizing randomly selected pathways.

Funk shows utilizing randomly selected pathways (col. 12 lines 12 – 34).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa and Ishiguri with that of Funk in order to provide for better data distribution and thus improved performance (Funk, col. 12 lines 12 – 34).

10. Claims 3, 6, 7 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Megiddo in view of Togawa, Ishiguri and Funk as applied to claims 1, 4, and 8 above, and further in view of Grobman (US 2004/0190722 A1) and Muschenborn (US 2002/0191796 A1).

11. Regarding claim 3, Megiddo in view of Togawa, Ishiguri and Funk show claim 1, including performing encryption prior to network transmission (Megiddo, Abstract).

Megiddo in view of Togawa, Ishiguri and Funk do not show using a public key of the chunk assembly agent.

Grobman shows using a public key of the chunk assembly agent ([19, 20, 32] and Figs. 1A, 1B).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri and Funk with that of Grobman in order to provide for the strong security desired by Megiddo.

Megiddo in view of Togawa, Ishiguri, Funk and Grobman do not show wherein each of the plurality of chunks is encrypted.

Muschenborn shows wherein each of the plurality of chunks is encrypted (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri, Funk and Grobman with that of Muschenborn in order to further enhance security through additional encryption.

12. Regarding claim 6, Megiddo in view of Togawa, Ishiguri and Funk show claim 4, including encryption before transmission (Megiddo, Abstract) and where said encrypted email being decrypted when received by the chunk assembler (Megiddo, Abstract, Fig. 5).

Megiddo in view of Togawa, Ishiguri and Funk do not show using a public key of the chunk assembly agent and decrypting using a private key.

Grobman shows using a public key of the chunk assembly agent ([19, 20, 32] and Figs. 1A, 1B) and decrypting using a private key ([4,12,17]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri and Funk with that of Grobman in order to provide for the strong security desired by Megiddo.

Megiddo in view of Togawa, Ishiguri, Funk and Grobman do not show wherein each of the plurality of chunks is encrypted.

Muschenborn shows wherein each of the plurality of chunks is encrypted

(Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri, Funk and Grobman with that of Muschenborn in order to further enhance security through additional encryption.

13. Regarding claim 7, Megiddo in view of Togawa, Ishiguri, Funk, Grobman and Muschenborn further show wherein text of said original e-mail is encrypted by using the public key of said receiver (Grobman, [19, 20, 32]) before being divided into a plurality of chunks (Megiddo, col. 2 lines 66 – 67 and Abstract).

14. Regarding claim 10, Megiddo in view of Togawa, Ishiguri and Funk show claim 8.

Megiddo in view of Togawa, Ishiguri and Funk do not show using a public key of the chunk assembly agent.

Grobman shows using a public key of the chunk assembly agent ([19, 20, 32] and Figs. 1A, 1B).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri and Funk with that of Grobman in order to provide for the strong security desired by Megiddo.

Megiddo in view of Togawa, Ishiguri, Funk and Grobman do not show wherein each of the plurality of chunks is encrypted.

Muschenborn shows wherein each of the plurality of chunks is encrypted (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri, Funk and Grobman with that of Muschenborn in order to further enhance security through additional encryption.

15. Claims 12 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Megiddo in view of Togawa, Ishiguri and Funk as applied to claims 1, 4, 8 and 11 above, and further in view of Devanagondi (US 7,317,730).

16. Regarding claim 12, Megiddo in view of Togawa, Ishiguri and Funk show claim 1.

Megiddo in view of Togawa, Ishiguri and Funk do not show wherein the predetermined algorithm is "chunk # = 1 + modulo x".

Devanagondi shows using the predetermined algorithm "chunk # = 1 + modulo x" (specifically showing a predetermined algorithm for dividing data to determine where it is sent, where “chunk #” is represented by the queue number of Devanagondi; see Abstract, Fig. 4, col. 5 line 60 – col. 6 line 40, col. 7 lines 26 - 48)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri and Funk with that of Devanagondi in order to decrease the reassembly complexity (Devanagondi, col. 7 lines 26 – 31).

17. Regarding claim 13, Megiddo in view of Togawa, Ishiguri and Funk show claim 4.

Megiddo in view of Togawa, Ishiguri and Funk do not show wherein the predetermined algorithm is "chunk # = 1 + modulo x".

Devanagondi shows using the predetermined algorithm "chunk # = 1 + modulo x" (specifically showing a predetermined algorithm for dividing data to determine where it is sent, where “chunk #” is represented by the queue number of Devanagondi; see Abstract, Fig. 4, col. 5 line 60 – col. 6 line 40, col. 7 lines 26 - 48)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri and Funk with that of Devanagondi in order to decrease the reassembly complexity (Devanagondi, col. 7 lines 26 – 31).

18. Regarding claim 14, Megiddo in view of Togawa, Ishiguri and Funk show claim 8.

Megiddo in view of Togawa do not show wherein the predetermined algorithm is "chunk # = 1 + modulo x".

Devanagondi shows using the predetermined algorithm "chunk # = 1 + modulo x" (specifically showing a predetermined algorithm for dividing data to determine where it is sent, where “chunk #” is represented by the queue number of Devanagondi; see Abstract, Fig. 4, col. 5 line 60 – col. 6 line 40, col. 7 lines 26 - 48)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri and Funk with that of Devanagondi in order to decrease the reassembly complexity (Devanagondi, col. 7 lines 26 – 31).

19. Regarding claim 15, Megiddo in view of Togawa, Ishiguri and Funk show claim 11.

Megiddo in view of Togawa do not show wherein the predetermined algorithm is

"chunk # = 1 + modulo x".

Devanagondi shows using the predetermined algorithm "chunk # = 1 + modulo x" (specifically showing a predetermined algorithm for dividing data to determine where it is sent, where “chunk #” is represented by the queue number of Devanagondi; see Abstract, Fig. 4, col. 5 line 60 – col. 6 line 40, col. 7 lines 26 - 48)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Megiddo in view of Togawa, Ishiguri and Funk with that of Devanagondi in order to decrease the reassembly complexity (Devanagondi, col. 7 lines 26 – 31).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. MacIlwinen whose telephone number is (571) 272-9686. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST; off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joon Hwang, can be reached on (571) 272 - 4036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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